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CRUSTACEA

COMPILED BY

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AND

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Nerve physiology.—**Adelman**, W. J. & (1); **Hoyle**, G. & (1); **Kuffler**, S. W. & **Eyzaguirre**, C.; **Lavalland**, R., **Santos**, H. L. de S. & **P. de S.** & **Sawaya**, P.; **Eyzaguirre**, C. & **Kuffler**, S. W.; **Hoyle**, G. & **Wiersma**, C. A. G. (0-1); **Kennedy**, D.; **Smith**, H. M.; *Carcinus* & *Astacus*, statocyst, **Dijkgraaf**, S.; **Lobster**, **Dalton**, J. C.; **Lobster**, **Wright**, E. B. & **Reuben**, J. P.; **Lobster**, **Tobias**, J. M.; Retinal pigment, *Cambarellus*, **Fingerman**, M. (1); *Cambarus*, contractile protein, **Maruyama**, K.; *Cambarus*, **Inoue**, K., **Takesige**, T., **Ito**, H. & **Irie**, T.; Crayfish, **Hagiwara**, S.; Crayfish, **Robbins**, J. & **Kloot**, W. G. van der; Crayfish, **Van de Kloot**, W. G., **Robbins**, J. & **Cooke**, I. M.; *Panulirus*, **Matsui**, K. & **Shibuya**, T.; orientation of *Mysidium*, **Bainbridge**, R. & **Waterman**, T. H.; *Idotea*, neurosecretory system, **Miyawaki**, M.; *Daphnia*, heartbeat, **Fritsch**, R. H. & **Meijering**, M. P. D.; Low temperature, **Wright**, E. B.; Proprioceptors, **Alexandrowicz**, J. S.; Neurosecretion in Cladocera, **Sterba**, G.

Sense organs.—*Palaemon*, **Patwardhan**, S. S.; *Meganyctiphanes*, eye pigments, **Fisher**, L. R., **Goldie**, E. H. & **Plack**, P. A.; chemoreceptors-electrophysiology, **Hodgson**, E. S.; Gastroliths of Eocene Crustacea, **Frizzell**, D. L. & **Exline**, H.; Vision, Pigment migration, **Bruin**, G. H. P. de; Vision, Anostraca, **Lockhead**, J. H. & **Resner**, R.; Oculo-motor reactions in *Daphnia*, **Scheffer**, D., **Robert**, P. & **Médioni**, J..

Reproductive organs.—*Palaemon*, **Patwardhan**, S. S.; Crayfish, **Johnson**, T. L.; *Cambarus*, **Word**, B. H. & **Hobbs**, H. H., Jr.; *Procambarus*,

Suko, T.; Euphausiacea, **Zelikman**, E. A.; *Limnoria*, **Hockley**, A. R. & **Eltringham**, S. R.; androgenous tissue in Oniscoida, **Legrand**, J. J. (1); *Asellus*, **Tadini**, G. V.

Hormones.—Crustacea, **Callan**, H. G.; **Carlisle**, D. B.; **Veillet**, A.; *Rhithropanopeus*, **Bojarshi**, R. & others; *Carcinus*, **Demeusy**, N. & **Veillet**, A.; *Procambarus*, **Nagano**, T.; *Porcellio*, **Patané**, L. & **Luca**, V. de (1); *Orchestia*, **Charniaux-Cotton**, H.; *Lysmata*, **Charniaux-Cotton**, H. (1); Ovarian inhibiting hormone in *Potamon*, **Hanaoka**, K. I. & **Otsu**, T.; Ocular peduncles, *Pachygrapsus*, **Vernet-Cornubert**, G. (1); *Uca*, melanophores, **Burgers**, A. C. J.; *Metoponorthus*, removal of sinus gland, **Shimoizumi**, M.

Colour.—*Uca*, melanophores, **Burgers**, A. C. J.; *Orconectes*, **Fingerman**, M.; *Cambarellus*, **Fingerman**, M. & **Low**, M. E.; *Leander*, **Pasteur**, C.; **Chassard**, C.; Isopods, **Vandel**, A. (1); *Procambarus*, **Nagano**, T.; chromatophorotopins in *Orconectes*, **Fingerman**, M. & **Aoto**, T.; of *Cambarellus*, **Fingerman**, M. & **Aoto**, T. (1); *Leander*, chromactivating substances, **Knowles**, F. & **Carlisle**, D. B.; Variation in colour in *Cyclops*, **Dupraw**, E. J., Jr.

Bioluminescence.—**Nicol**, J. A. C.

Ecdysis.—**Crisp**, D. J. & **Patel**, B. S.; Xanthidae, **Knudsen**, J. W.; *Carcinus*, **Demeusy**, N.; *Pisa*, **Vernet-Cornubert**, G. (2); *Pinnotheres*, **Christensen**, A. M. & **McDermott**, J. J.; *Procambarus*, **Suko**, T.; *Homarus* **Thomas**, H. J. (1); *Balanus*, **Costlow**, J. D. & **Bookhout**, C. G. (1); male *Daphnia*, **Fritsch**, R. H.; Ecdysis of cavernicolous woodlice, **Vandel**, A.

Biochemistry.—**Farkas**, T. (1); chromatography, **Farkas**, J.; *Carcinus*, **Frentz**, R. & (1); *Potamon*, **Shaw**, J. (3); *Hemigrapsus*, **Hu**, A. S. L.; *Pachygrapsus*, **Gross**, W. J.; *Astacus*, **Shaw**, J. (2); *Penaues*, **Krishnakumar**, A.; *Talitrus* metabolism, **Lafon**, M.; *Artemia*, **Croghan**, P. C. (3); **Bellini**, L.; Lipase in *Artemia*, **Bellini**, L. & **Lavizzari**, G. S.; chromatography, eye-stalk extract, etc., **Kuhnen**, H.; Haemoglobin, **Fox**, H. M. (1); Radiophosphorus metabolism, **Harris**, E.;

green gland, *Cancer*, **Beers**, J. R. ; Ovarian inhibiting hormone in *Potamon*, **Hanaoka**, K. I. & **Otsu**, T. ; Blood glucose of *Hemigrapsus*, **McWhinnie**, M. A. & **Scheer**, B. J. ; Anti-cholinesterase on abdominal ganglia of *Cambarus*, **Inoue**, K., **Fuzita**, A., **Simizu**, K. & **Amano**, N. ; electrophoresis of chromatophorotropons in *Cambarus*, **Fingerman**, M. & **Oata**, T. (1) ; Sodium uptake in *Astacus*, **Shaw**, J. (4) ; ribonucleic acid in development of *Artemia*, **Urbani**, E. & **Bellini**, L. ; Chemical constituents of ostracods, **Sohn**, I. G.

Vitamins.—Lobster, **Wald**, G. & **Burg**, S. P. ; Euphausiids, **Wald**, G. & **Brown**, P. K.

REPRODUCTION AND SEX

Reproduction.—*Pachygrapsus*, **Vernet-Cornubert**, G. (1) ; *Pisa*, **Vernet-Cornubert**, G. (2) ; *Pinnotheres*, **Christensen**, A. M. & **McDermott**, J. J. ; *Nephrops*, **Luling**, K. H. ; *Penaeus*, **Anderson**, W. W. ; **Tirmizi**, N. M. ; *Leander*, **Kunju**, M. M. ; **Jensen**, J. P. (1) ; *Palaemon*, **Cole**, H. A. ; Woodlice, **Cloudsley-Thompson**, J. L. ; **Legrand**, J. J. ; **Patané**, L. & **Luca**, V. de (1) ; *Daphnia*, **Pyatkov**, M. L. ; *Daphnia*, **Suginome**, M. ; *Evadne*, **Bainbridge**, V. ; *Chirocephalus*, **Nourisson**, M. ; Copepoda, **Monakov**, A. V. ; gonads. *Orchestia*, etc., **Graf**, F. ; Sperm in "testes" of *Peltoaster* derived from cypris stage males, **Ichikawa**, A. & **Yanagimachi**, R. ; Pairing in *Balanus*, **Clegg**, D. J. ; ovulation *Mytilicola*, **Donato**, A.

Secondary sex characters.—Hormones, **Charniaux-Cotton**, H. ; *Pachygrapsus*, **Vernet-Cornubert**, G. (1) ; *Carcinus*, **Demeusy**, N. ; *Pisa*, **Vernet-Cornubert**, G. (2) ; *Nephrops*, **Luling**, K. A. & (1) ; *Asellus*, **Balesdent-Marquet**, M. L. & **Veillet**, A. ; *Porcellio*, **Patané**, L. & **Luca de**, V. ; Regeneration of pleopods of crab parasitised by *Sacculina*, **Vernet-Cornubert**, G.

Sex determination.—Crustacea, **Callan**, H. G.

Sex dimorphism.—*Nephrops*, **Luling**, K. H. ; *Lepidurus*, **Chaigneau**,

J. ; Dwarf males in L. Baikal, **Bekman**, M. & U.

Sex ratio.—*Chirocephalus*, **Hu**, B.-C. & **Hwang**, M.-H.

Hermaphroditism and Intersexes.—Crayfish, **Kiortsis**, V. ; *Lysmata*, **Charniaux-Cotton**, H. (1) ; *Orchestia*, **Balesdent**, M. L. & **Veillet**, A. ; Tanaidacea, **Lang**, K. (1) ; Self-fertilisation in *Chthamalus*, **Barnes**, H. & M. (2).

DEVELOPMENT

Development.—*Pisa*, **Vernet-Cornubert**, G. (2) ; *Orconectes*, male pleopods, **Black**, J. B. ; *Procambarus*, **Suko**, T. ; Thelycum of *Penaeus*, **Tirmizi**, N. M. ; *Lophopanepeus*, **Knudsen**, J. W. (1) ; *Jaera*, **Renault**, O. ; Vascular organs of *Asellus*, **Länge**, H. ; *Asellus*, gonads, **Tadini**, G. V. ; *Orchestia* gonads, etc., **Veillet**, A. & **Graf**, F. ; **Graf**, F.

Egg.—Relation between body size and egg numbers in malacostraca, **Jensen**, J. P. ; *Palaemon*, **Cole**, H. A. ; *Leander*, **Jensen**, J. P. (1) ; hatching of *Calanus*, **Marshall**, S. M. & **Orr**, A. P. (1) ; Egg colour in *Cyclops*, **Dupraw**, E. J., Jr. ; *Artemia* eggs in high vacuum, **Dempster**, R. P. & **Hanna**, G. D. ; Resting and subcutaneous eggs of copepods, **Roen**, U.

Spermatogenesis.—Spermatophores in *Dolops*, **Fryer**, G. (2) ; *Derocheilocaris*, **Tuzet**, O. & **Fize**, A. ;

Embryology.—**Heegaard**, P. E. (1) ; *Gammarus*, **Weygoldt**, P. ; *Asellus* vascular system, **Länge**, H. ; embryology of Copepods, **Kiknadze**, I. I.

Larval stages.—**Pai**, P. G. ; in plankton, **Rose**, M. ; Decapoda, **Prasad**, R. R. & **Tampi**, P. R. S. ; Post larval Ocypodidae, **Gamo**, S. (2) ; *Varuna* and *Eriocheir*, **Gamo**, S. (1) ; *Pinnotheres*, **Christensen**, A. M. & **McDermott**, J. J. ; Glaucothoe of *Catapaguroides* and *Clibanarius*, **Dechanceé**, M. & **Forest**, J. ; *Ibacus*, **Harada**, E. ; *Thor*, **Broad**, A. C. ; *Entocythere*, **Stamper**, M. N. ; morphology of nauplii, **Rzhepishevski**, I. K. ; *Mictyricola*, **Nicholls**, A. G. ; *Balanus*, **Costlow**, J. D. & **Bookhout**, C. G. ; Barnacle nauplii, **Crisp**,

D. J. (1); Life cycle of *Lernaea*, **Grabda**, J.

Growth.—*Pachygrapsus*, **Vernet-Cornubert**, G. (1); *Carcinus*, **Dem-eusy**, N. ; *Cancer*, **Waldron**, K. D. ; *Pinnotheres*, **Christensen**, A. M. & **McDermott**, J. J. ; *Orconectes*, male pleopods, **Black**, J. B. ; *Homarus*, **Thomas**, H. J. (1) ; *Palaemon*, **Cole**, H. A. ; *Misra*, R. K. ; *Penaeus*, **Anderson**, W. W. ; **Kubo**, I. ; *Metapenaeus*, **Dall**, W. ; *Caprella*, **Bel-leudy**, M. ; *Jaera*, **Renault**, O. ; male *Daphnia*, **Fritsch**, R. H. ; *Lepas*, **Evans**, F. ; **Skerman**, T. M. (1) ; *Verruca*, **Barnes**, H. ; *Evadne*, **Bainbridge**, V. ; *Triops*, *Strepto-cephalus* & *Estheria*, **Pai**, P. G.

Regeneration.—Regeneration of pleopods of *Pachygrapsus* parasitised by *Sacculina*, **Vernet-Cornubert**, G. ; *Sphaeroma*-uropods, **Montel**, M. F. ; *Idotea*, **Bossant**, M.

EVOLUTION AND GENETICS

Evolution.—**Manton**, S. M. ; **Tiegs**, O. W. & **Manton**, S. M. ; **Hobbs**, H. H. (3) ; **Snodgrass**, R. E. ; **Heegaard**, P. E. (1) ; **Sara**, M. ; *Cladocera*, **Lieder**, U. (2) ; Super-specialization of Crab, **Imaizumi**, R. (1) ; Speciation in *Cyclops*, **Price**, J. L.

Genetics.—**Legrand**, J. J. (2) ; *Asellus*, **Tadini**, G. V. (1) & (2) ; *Sphaeroma*, **Bocquet**, C. & **Lejuez**, R. (0-1) ; Polychromatism, *Sphaeroma*, **Lejuez**, R. ; *Idotea*, **Tinturier-Hamelin**, E. ; *Tigriopus*, **Takeda**, N. ; *Tisbe*, **Battaglia**, B. (0-1) ; Breeding experiments, *Chirocephalus*, **Hu**, B.-C. & **Hwang**, M.-H. ; *Cyclops*, **Price**, J. L.

Variation.—**Longhurst**, A. R. (1) ; Polymorphism, **Battaglia**, B. ; *Tisbe*, **Battaglia**, B. & **Pulze**, E.

Classification.—Taxonomy, ostracods, **Morris**, R. W. ; Conchostraca, **Tasch**, P.

ECOLOGY AND HABITS

General Ecology.—**Reznichenko**, O. G. ; **Sourie**, R. ; **Stephenson**, W., **Endean**, R. & **Bennett**, I. ; planktonic Crustacea, **Votintsev**, K.

K. ; *Cladocera*, **Manuilova**, E. F. ; fresh-water copepods, **Roenn**, U. ; Paleocology, **Beerbower**, J. R. ; Food relationships, Crustacea & fish, **Darnell**, R. M.

Ecology of Special Forms.—Malacostraca, **Lukacsovics**, F. ; *Pisa*, **Vernet-Cornubert**, G. (2) ; *Birgus*, **Ridley**, M. W. & **Percy**, R. ; *Astacus*, **Cukerzis**, J. ; *Penaeus*, **Anderson**, W. W. ; *Metapenaeus*, **Dall**, W. ; *Paratya*, **Kamita**, T. (0-1) ; *Palaemon*, **Kamita**, T. ; *Leander*, **Kamita**, T. (2) ; Cumacea, **Lomakina**, N. B. ; **Pike**, R. B. & **Le Sueur**, R. F. ; Amphipoda, **Barnard**, J. ; *Corophium*, **Reineck**, H. E. ; *Gammarus*, **Case-ment**, R. J. ; *Idothea*, **Cajevskaja**, N. S. ; **Naylor**, E. (1) ; terrestrial Isopoda, **Arcangeli**, A. (4) ; **Gere**, G. ; **Tischler**, W. ; Copepods, **Mon-akov**, A. V. (1) ; *Mesocyclops*, **Elg-mork**, K. ; Harpacticoids on mud-flat, **Barnett**, P. R. O. ; *Cladocera*, **Jones**, W. H. ; **Borecky**, G. W. ; *Bosmina*, **Purasjoki**, K. J. ; *Holopedium*, **Hamilton**, J. D. ; *Strepto-cephalus*, **Moore**, W. G. ; *Chthamalus*, **Brémond**, J.-C. ; *Balanus*, **Ota**, K. ; Resistance to desiccation of barnacles, **Barnes**, H. & M.

Marine plankton.—**Brodsky**, K. A. ; **Brodsky**, K. A. & **Vinogradov**, M. E. ; **Beklemishev**, K. V. ; **Bsharah**, L. ; **Vučetić**, T. ; **Hall-grimsson**, (0-1) ; **Hulme**, E. ; **Hoenigman**, J. ; **Jermolajev**, E. G. ; **Jones**, N. S. ; **Lieder**, U. (2) ; **Moore**, H. B. ; **Marques**, E. ; **Negrea**, St. ; **Nielsen**, E. S. ; **Rose**, M. (1) ; **Shcherbakov**, A. P. ; **Ponomareva**, L. A. ; **Tsuruta**, A. ; **Satow**, T., **Hayama**, K. & **Chiba**, T. ; **Wiborg**, K. F. ; **Wickstead**, J. H.

Deep Sea.—**Gordon**, I. ; **Menzies**, R. J. & **Dow**, T. ; **Longhurst**, A. R. ; **Marshall**, N. B. ; **Perkins**, E. J.

Marine bottom.—**Buchanan**, J. **Gauthier**, Y. V.

Shore ecology.—**Kalk**, M. ; **Lewis**, J. R. ; Shore microfauna, **Perkins**, E. J. (1) ; sand & pebble habitat, **Ljachov**, S. M. ; Mangrove region, **Gerlach**, S. A. (1).

Freshwater habitats.—**Pljakic**, M. A. & **Zivkovic**, A. ; Relict Fauna

Segerstrale, S. G. ; *Mysis*, Holmquist, C. (1) ; Limnology, Berg, K. ; Bittel, L. ; Edmondson, W. T. ; Engelhardt, W. (1) ; Halme, E. ; Herbst, H. V. (2) ; Kowalczyk, C. ; Kiselyte, T. ; Kumsäre, Q. & Selkere, R. ; Lawler, G. H. & Watson, N. H. F. ; Lindström, T. ; Löffler, H. ; Sebestyén, O. (0 — 1) ; Shcherbakov, A. P. ; Stube, M. ; Tressler, W. L. ; Whittaker, R. H. & Fairbanks, C. W. ; Berzins, B. ; Grobe, D. ; Grygierek, E. ; Halme, E. ; Kurasawa, H. (1) ; Leentvaar, P. (0-1) ; Sládeček, V. ; Sládeček, V., Cyrus, Z. & Borovickova, A. ; Sládeček, V. & Sládečková, A. ; Szlauer, L. ; Thomasson, K. ; Tonolli, V. (0-1) ; Voromina, N. M., Spring fauna, Stella, E. ; River, Borutzki, E. V. & Verigin, B. V. ; Ponds, Braginski, L. P. ; Grygierek, E. (1) ; Lellak, J. ; Sládeček, V., Cyrus, Z. & Borovickova, A. ; Stiller, J. ; Tucker, D. S.

Brackish water.—Segerstrale, S. G. (2) ; Bersamin, S. V. ; Seshadri, B. ; Thermal waters, Matonićkin, I. ; Bromeliacid leaves, Noodt, W. (2).

Subterranean habitats.—Chappuis, P. A. (1) ; Delamare-Deboutteville, C. L. ; Leruth, R. ; Mateus, A. & E. de O. ; Monchenko, V. I. (1) ; Ponyi, E. (1) ; Stella, E. ; *Rhopalonus*, Gordon, I. (1) ; *Bathynella*, Farkas, H. (2) ; *Asellus*, Braga, J. M. ; Isopoda, Vandel, A. (2) ; Amphipoda, Mateus, A. & E. de O. ; Woodlice, Butirović, A. ; Interstitial habitats, Chappuis, P. A. (6) ; Chappuis, P. A. & Delamare-Deboutteville, C. L. ; Pennak, R. W. ; Siewing, R.

Terrestrial habitats. — Forest litter, Harding, J. P.

Environmental effects.—Anderson, W. W. ; Laurent, P. J. ; brackish water tolerance, Lagerspetz, K. ; *Gammarus*, Lukacovics, F. (1) ; Low temperatures, Wright, E. B. ; Survival, toxic agents on crustacea, Corner, E. D. S. & Rigler, F. H. ; Low temperature on *Chelura* & *Limnoria*, Nair, N. B. & Leivestad, H. ; Survival of *Artemia*, Croghan, P. C.

Naturalisation and Acclimatization.—*Rhithropanopeus*, Rasmussen, E. ; Thermal adaptation in *Tigriopus*, Takeda, N.

Migrations. — Penacid Prawns, Kubo, I. ; Anderson, W. W. ; Leander, Jensen, J. P. (1) ; *Limnoria*, Hockley, A. R. & Eltringham, S. R. ; Vertical distribution of Copepods, Heinrich, A. K. (1) ; *Evadne*, Bainbridge, V. ; Vertical migration, Ringelberg, J.

Population Studies.—Berg, K. ; Bersamin, S. V. ; Borecky, G. W. ; Braginski, L. P. ; Comita, G. W. ; Edmondson, W. T. ; Frank, P. W. ; Grygierek, E. ; Hoestlandt, H. ; Kurasawa, H. ; Lindström, T. ; Livingstone, D. A. ; Cladocera and bacteria, Manuilova, E. F. ; Sebestyén, O. (1) ; Sládeček, V. ; Moore, W. G. ; Roen, U. ; Tonolli, V. (1) ; Voronina, N. M. ; Vučetić, T. ; Copepods, Whittaker, R. H. & Fairbanks, C. W. ; Woy-nárovich, E.

Bionomics.—Leander, Kunju, M. M. ; *Palaemon*, Patwardhan, S. S. ; *Senecella*, Pirozhnikov, P. L. ; Inhibitory effects of algae on feeding of *Daphnia*, Ryther, J. H..

Biometrics.—*Palaemon*, Cole, H. A. ; Misra, R. K. ; *Synurella*, Pljakić, M. A. ; *Cyclops*, Rejic, M. ; Cladocera, Rappoport, E. H.

Seasonal, diurnal and other rhythms.—*Tetracita*, Mori, S. ; *Carcinus*, Naylor, E. ; Crawfish, Lowe, M. F. & M. E. ; in woodlice, Cloudsley-Thompson, J. L. (1) ; *Mesocyclops*, Elgmork, K. ; Feeding rhythm in *Acartia*, Petipa, F. S. ; Seasonal changes, Copepoda, Kado, Y. ; Lake plankton, Shcherbakov, A. P. ; Marshall, S. M. & Orr, A. P.

Food of Crustacea.—Yaldwyn, J. C. (1) ; Leander, Kunju, M. M. ; *Evadne*, Bainbridge, V. ; Cirripedes, Southward, A. J. & Crisp, D. J. ; Copepods, Petipa, T. S. ; food chains, Perkins, E. J. ; *Calanus*, Marshall, S. M. & Orr, A. P. (1).

Predators.—Fish & shrimps cleaning copepod parasites off larger fish, Randall, J. E. Fish, Darnell, R. M.

Behaviour.—Carthy, J. D. ; Orientation to moon, Papi, F. &

Pardi, L. ; *Uca*, **Crane, J.** ; **Gerbach, S. A.** ; **Gordon, H. R. S.** ; **Cancer, Waldron, K. D.** ; *Carcinus*, **Edwards, R. L.** ; **Boulet, P. C.** ; *Penaeids*, **Williams, A. B.** ; *Metapenaeus*, **Dall, W.** ; *Alpheus*, **Rangarajan, K.** ; *Talitrus*, **Pardi, L. & (1)** (2) ; *Limnoria & Chelura*, **Bourdillon, A.** ; **Cloudsley-Thompson, J. L.** ; **Pardi, L.** ; **Saxena, S. C.** ; swimming movements *Palaemon & Pandalus*, **Marr, D. H. A.** ; Stranding of Crayfish, **Judd, W. W.** ; *Cirripedes*, **Southward, A. J. & Crisp, D. J.** ; **Barnes, H. & M. (1)** ; **Stubbings, H. G.** ; *Tetracrita*, **Mori, S.** ; Barnacle settlement, **Daniel, A. (1)** ; **Skerman, T. M.** ; Habits & Evolution, **Manton, S. M.**

Parasites.—Parasites of fish, **Bauer, O.** ; **D'Ancona, U.** ; **Dyk, V. & Stedronský, E.** ; **Green, J. (2)** ; **Hargis, W. J.** ; **Humes, A. G. (1)** ; of Carp, **Ivassik, V. M.** ; **Malaviya, R. B.** ; **Rangnekar, M. P.** ; **Reichenbach-Klinke, H. H.** ; **Sidorov, E. G.** ; **Shiino, S. M. (3)** ; **Smirnova, K. V.** ; **Wise, J. P.** ; Bopyrids, *Epipenaeon*, **Dawson, C. E. (1)** ; **Pike, R. B.** ; **Shiino, S. M. (6)** ; *Cyamus*, **Wolff, T.** ; Copepoda on Mollusca, **Humes, A. G. (2)** ; on Starfishes, **Humes, A. G. & Cressey, R. F. (2)** ; Ostracod as intermediate host of trematode, **Macy, R. W. & Demott, W. R.** ; Tapeworms, **Jarecka, L.** ; **Michajłow, W.** ; **Jarecka, L. (0 & 1)** ; **Kisielewska, K.** ; **Michajkow, W.** ; Tetracyllidean larva parasitic in *Eucalanus*, **Anantaraman, S. & Krishnaswamy, S.** ; *Paragonimiasis*, Potamonid hosts, **Yogore, M. G., Jr.** ; Microsporidiae, of *Artemia*, **Codreanu, R.** ; Planarian (*Varsoviella*) on gills of *Gammarus*, **Geyer-Duszyńska, I.** ; Parasites of *Palaemon*, **Cole, H. A.** ; **Leander, Kunju, M. M.** ; Fungi, in gills of crustacea, **Sordi, M.** ; Frond mining Copepod nauplius, **Green, J. (1).** See also p. 51.

Commensalism.—**Green, J. (3)** ; *Pseudothelphusa*, **Hobbs, H. H. & Villalobos, A.** ; *Rhithropanopeus*, organisms settling on it, **Mordukhai-Boltovskoy, F. D.** ; *Pinnotheres*, **Christensen, A. M. & McDermott, J. J.** ; *Pontonia & Pinna*, **Guerrero, J. M. G.-M.** ; *Alpheus & Cryptocentrus*, **Luther, W.** ; *Balanus & Strongylocentrotus*, **Booolootian, R. A.** ; *Mega-*

balanus on Shark *Squalus*, **Bahamonde, N. N. (1)** ; *Mytilus* on *Lernaeocera*, **Slinn, D. J.** ; *Allogausia* and *Anthopleura*, **Stusek, C. R.** ; *Cladocera* and Rotifers, **Vlastov, B. V.** ; Harpacticids with crabs, **Nicholls, A. G.**

GEOGRAPHICAL DISTRIBUTION

Zoogeography, **Löffler, H. (1)**

Amphipod carried by Duck, **Rosine, W.** ; Distribution of *Elminius*, **Bishop, M. W. H. & Crisp, D. J.** ; **Crisp, D. J.** ; *Niphargus*, **Sket, B.**

1. LAND AND FRESHWATER.

Arctic.—**Reed, E. B. (1)** ; **Comita, G. W.**

PALAEARCTIC REGION

Atlantic Islands.—Madeira, **Figureira, A. J. G.** ; **Arcangeli, A.** ; Canary Islands, **Arcangeli, A.** ; Azores, **Renault, O.** ; St. Helena, **Ingle, R. W.**

British Isles & Channel Islands.—**Thomas, H. J.** ; **Ingle, R. W. (1)** ; Lake District, **Smyly, W. J. P.** ; Ireland, **Crisp, D. T. & Heal, O. W.** ; Channel Islands, **Pike, R. B. & Le Sener, R. F.**

Spitzbergen.—**Thomasson, K.**

Sweden.—**Stube, M.** ; **Lieder, U.** ; **Berzins, B.**

Finland.—**Halme, E.** ; **Green, J. (3).**

Denmark.—**Kaiser, E. W.**

Poland.—**Ertl, M. & Juriš, S.** ; **Grabda, E. & J.** ; **Hajduk, Z.** ; **Kowalczyk, C.** ; **Bittel, L.** ; **Wisniewski, W. L.** ; **Jarecka, L.** ; **Urbanski, J.** ; **Kozicka, J.** ; **Grygierck, E. (1)** ; **Szlauer, L.**

Latvia.—**Kumsäre, A. & Selkere, R.**

Lithuania.—**Kiselyte, T.** ; **Krotas, R.**

Austria.—**Strouhal, H. (1-2)** ; **Löffler, H.**

Germany.—**Engelhardt, W. (1)** ; **Brehm, V. (9)** ; **Engelbrecht, H.** ; **Frey, D. G.** ; **Kiefer, F. (2, 5)** ; **Hadzi, J.** ; **Ehrenberg, H.** ; **Lieder, U. (1).**

Switzerland.—**Grobe, D.**

France.—Dussart, B. ; Chappuis, P. A. & Rouch, R. ; Vandell, A. (3) ; Beauchamp, P. de ; Dussart, B. (1) & (2) ; Wautier, J. & Roux, A.

Belgium.—Leruth, R.

Netherlands.—Holthuis, L. B. (4) ; Leentvaar, P.

Spain.—Ortiz, E. ; Margalef, R. ; Vandell, A. (3).

Portugal.—Braga, J. M. ; Mateus, A. & E. de O.

Italy.—Fox, H. M. ; Tonolli, V. ; Arcangeli, A. (1) ; Brian, A. ; Strouhal, H. ; Ruffo, S. & Vesentini, G. ; Stella, E.

Czechoslovakia.—Bulva, V. ; Brtek, J. (0-1) ; Brtek, J. & Straskraba, Grabda, E. & J. (1) ; Dyk, V. & Lucký, Z. ; Kubiček, F. ; Kolosváry, G. (3) ; Kulhavý, V. (0-1) ; Lellak, J. ; Sket, B. (1) ; Losos, B. & Marwan, P. ; Rejic, M. (1) ; Sládeček, V. & Sládečková, A. ; Sládeček, V., Cyrus, Z. & Borovičková, A. ; Straškraba, M. ; Sramek-Husek, R. (0-1) ; Vojtek, J. ; Vranovský, M. & E.

Hungary.—Farkas, H. K. (0-1, 3) ; Kolosváry, G. (2) ; Lukacsovics, F. ; Ponyi, E. & (1)-(3) ; Sebestyén, O. & (1) ; Stiller, J. ;

Roumania.—Damian, A. ; Marcu, O. ; Plesa, C. ; Radu, V. Gh. ; Radu, V. Gh. & Cadaru, M.

Yugoslavia.—Buturović, A. (0-1) ; Herbst, H. V. (1) ; Matoničkin, I. ; Mikulić, F. ; Petkovski, T. K. ; Pljakić, M. A. ; Popovska-Stankovic, O.

Greece.—Vandell, A. (2)

Crete.—Chappuis, P. A.

Turkey.—Lang, K. (0 & 4).

U.S.S.R.—Akatova, N. A. (0-1, 3) ; Astakhova, T. V. ; Bazikalova, A. Y. ; Bekman, M. Yu ; Graze, V. N. ; Gorbunov ; Gurvich, V. F. ; Donetz, R. ; Komarova, M. S. ; Koryakov, E. A. ; Kudryavtzeva, E. S. ; Mäemets, A. ; Melnikov, G. B. ; Monchenko, V. I. (1) ; Smirnov, S. S. (0 & 2) ; Stolyarov, V. P. ; Zhuravel, P. A.

Mongolia, China, Tibet.—Borutski, E. V. & Verigin, B. V. ; Shen, C.-J. (0 & 3) ; Shen, C.-J. & Wang, K.-N. ; Wang, K.-B. (0-1) ; Ying, W.-Y.

Japan.—Chappuis, P. A. (1) ; Kamita, T. (0-1, 3) ; Kurasawa, H. ; Ito, T. ; Morimoto, Y. & Miura, Y.

Philippines.—Bersamin, S. V.

North Africa.—Arcangeli, A. (10) ; Brehm, V. (4) ; Vandell, A. (5) ; Siwa oasis, Nilsson-Cantell, C. A. ; Sahara, Kiefer, F. (4) ; Egypt, Shatoury, H. H.

ETHIOPIAN REGION

East Africa.—Fryer, G. (1) ; Kiefer, F. (3).

West Africa.—Fryer, G. ; Lindberg, K. ; Kiefer, F. ; Rzoska, J.

S. Africa.—Arcangeli, A. (7)-(9) ; Brehm, V. (3) ; Chappuis, P. A. (3) ; Hartmann, G. ; Roth-Woltereck, E.

Madagascar.—Barnard, K. H. (2) ; Ile Amsterdam, Chappuis, P. A. (7).

ORIENTAL REGION

India.—Baid, I. ; Farkas, H. (4) ; Mathur, S. N. & Sidhu, W. ; Tripathi, Y. R.

Ceylon.—Wignarajah, S.

Sumatra.—Arcangeli, A. (5).

AUSTRALIAN REGION and POLYNESIA

Australia.—Herbst, H. V.

New Zealand.—Harding, J. P.

NEARCTIC REGION

North America.—Ferguson, E., Jr. ; Mattox, N. T.

Canada.—Bousfield, E. L. (2) & (3) ; Chappuis, P. A. & Delamare Deboutteville, C. L. ; Lawler, G. H. & Watson, N. H. F. ; Wilson, M. S. (0 & 4) ; Newfoundland, Palmén, E.

U.S.A.—Chappuis, P. A. (6) ; Cole, G. A. ; Dorris, T. C. ; Ferguson, E. (1) ; Gebhart, J. W. ; Hobbs, H. H. (1-3) ; Hobbs, H. H., Jr. & Walton, M. ; Jones, W. H. ; Lynch, J. E. ; Moore, W. G. (1) ; Penn, G. H. & Hobbs, H. H., Jr. ;

Reed, E. B. & Olive, J. R. ; Tressler, W. L. (0-1) ; Weise, J. G. ; Wilson, M. S. (0 & 2) ; Wootton, D. M. & Matton, N. T.

CENTRAL AMERICA

West Indies.—**Bold, W. A. van den ; Castro, A. L. de ; Gordon, I. (1) ; Hobbs, H. H., Jr.**

Mexico.—**Hobbs, H. H. & Villalobos, A. ; Moore, W. G. (1) ; Villalobos, A.**

Yucatan.—**Rioja, E.**

Venezuela.—**Brehm, V. (8).**

SOUTH AMERICA

South America.—**Arcangeli, A. (7) ; Brehm, V. (6) (7) ; Farkas, H. K. (1) ; Siewing, R. (1).**

Argentina.—**Brehm, V. (0-2) ; Brehm, V. (5) ; Ringuelet, P. A.**

Brazil.—**Castro, A. L. de.**

Chile.—**Bahamonde, N.**

Peru.—**Siewing, R.**

2. MARINE

ARCTIC

Arctic Ocean.—**Akatova, N. A. (2) ; Kuznetsov, V. V. ; Polyanski, Y. I. ; Reed, E. B. ; Smirnov, S. S. (1) ; Tarasov, N. I. ; Zelikman, E. A. ; Iceland coast, Hallgrimsson, I. (1) ; Greenland coast, Roen, U.**

NORTH TEMPERATE

North Atlantic.—**Naylor, E. (2) (European side).**—**Fischer-Piette, E. & Prenant, M. ; Joly, R. ; Kisch, B. S. (0-1) ; Noodt, W. ; Southward, A. J. & E. C. ; Tiffon, M. ; Wiborg, K. F. (American side).**—**Anon. (2) ; Bousfield, E. L. ; Bowman, T. E. ; Broad, A. C. ; Bsharah, L. ; Bullis, H. R., Jr. ; Chace, F. A. ; Christensen, A. M. & McDermott, J. J. ; Fleminger, A. & (1) ; Hulings, N. C. ; Gulf of Mexico, Idyll, C. P. ; Illg, P. L. ; Jermolajev, E. G. ; Lang, K. (3) ; Moore, H. B. & O'Berry, D. L. ; Puri, H. S. (2) ; Puri, H. S. & Hulings, N. C. ; Reinhard, E. G. & Reischman, P. G. ; Ronald, K. ; Tashian, R. E. & Vernberg, F. J. ; Taylor, C. C., Bigelow, H. B. & Graham, H. W. ; Wilson, M. S. (2-3).**

North Sea & Baltic.—**North Sea, Ancellin, J. ; Brattström, H. ; Hartmann, G. (2) ; Nybelin, O. ; Wolff, T. Baltic, Banse, K. ; Demel, K. & Mulicki, Z. ; Hartmann, G. (2) ; Halme, E. ; Kiselyte, T. ; Lieder, U. (2) ; Segerstrale, S. G. (1).**

British Coastal Waters.—**Ancellin, J. ; Atkins, D. ; Barrett, J. H. & Yonge, C. M. ; Bassindale, R. ; Bainbridge, V. ; Cole, H. A. ; Crisp, D. J. ; Crisp, D. J. & Southward, A. J. ; Edwards, R. L. ; Eaton, R. ; Eltringham, S. K. & Hockley, A. R. ; Green, J. ; Krishnaswamy, S. & Jones, L. T. ; Mason, J. ; Naylor, E. & Slinn, D. J. ; Perkins, E. J. & (1) ; Pike, R. B. ; Simpson, A. C. ; Stephen, A. C., Rae, B. B. & Wilson, E. ; Irish Coast, Roe, K. M.**

French Channel Coast.—**Bocquet, C. & Stock, J. H. (1) & (2) & (4) ; Bocquet, C. & Lemerrier, A. ; Lang, K. (2) ; Vos, A. P. C. de Netherlands Coast, Holthuis, L. B. (3).**

Mediterranean Sea.—**Anon. (1) ; Bourdillon-Casanova, L. ; Canicci, G. G. ; Dechancé, M. ; Changeux, J. P. ; Dechancé, M. & Forest, J. ; Delamare Deboutteville, C. D. & Nunes-Ruivo, L. ; Forest, J. & Guinot, D. ; Gauthier, Y. V. ; Guerrero, J. M. G.-M. ; Hartmann, G. (1) ; Holthuis, L. B. & Gottlieb, E. ; Mateus, A. & E. de O. (1) ; Mathias, P. & Donnadieu, P. ; Menzies, R. J. & Becker, G. ; Pérès, J. M. ; Rossi, L. ; Dieuzeide, R. & Roland, J. ; Bernard, M.**

Adriatic.—**D'Ancona, U. ; Hoenigman, J. (0-1) ; Roch, G. F. ; Vučetić, T. ; Zavodnik, D.**

Black Sea.—**Arbuzova, K. S. ; Bacesco, M. ; Caraion, F. E. ; Cajevskaja, N. S. ; Kolosváry, G. ; Ljachov, S. M. ; Negrea, St. ; Pora, E. A. & Precup, O. ; Renault, O.**

Caspian Sea.—**Romanova, N. N.**

NORTH PACIFIC

Euphausiids of Pacific, Boden, B. P. & Brinton, E.

North-West Pacific.—Birshtein, Y. A. & Chindonova, Y. G. ; Birsh-
tein, Y. A. & Vinogradov, M. E.

U.S.S.R. waters.—Brodsky, K. A. (1) ; Bulycheva, A. I. ; Geinrikh, A. K. ; Heinrich, A. K. (0, 1) ; Kamshilov, M. M. (0-1) ; Kobjakova, Z. I. (0-1) ; Kos, M. S. ; Lomakina, N. B. (0-1) ; Minoda, T. ; Oldevig, H. ; Reznichenko, O. G. ; Smirnova, K. V. ; Rzhepishovski, I. K. (1) ; Vagin, V. L. ; Vinogradov, M. E. ; Votintsev, K. K. ; Wagin, W. ; Zelikman, E. A. (1) ; Zontova, N. K.

Japanese Seas.—Gamo, S. (0-1) ; Hoshina, T. & Kuwabara, R. ; Kamita, T. (2) ; Kado, Y. ; Kubo, I. ; Maeda, R. ; Miyake, S. ; Ponomareva, L. R. ; Shiino, S. M. & (1-6) ; Tanaka, O. ; Utinomi, H. (0-1) ; Utinomi, H. & Harada, E. ; Yasuda, J.

China Seas.—Shen, C.-J. (0, 2, 4) ; Boschma, H. (1).

Eastern North Pacific.—Barnard, J. L. (2) & (3) ; Bousfield, E. L. (1) ; Cameron, F. E. ; Dow, T. G. ; Garth, J. S. ; Gooding, R. U. ; Jones, M. L. (1) ; Knudsen, J. W. (1) ; Menzies, R. J. ; Menzies, R. J. & Dow, T. ; Stasek, C. R. ; Waldron, K. D.

TROPICAL

Tropical Atlantic.—American side. Anderson, W. W. ; Bowman, T. E. (1) ; Holthuis, L. B. (2) ; Humes, A. G. ; Antilles, Morice, J. (0-1) ; Reinhardt, E. G. ; Wickstead, J. H. ; Smith, F. G. W. (1) ; Wilson, M. S. ; Yeatman, H. C. ; Coast of Brazil, Carvalho, J. de P. (0-1) ; Gerlach, S. A. ; W. African coast, Brehm, V. (10) ; Brehm, V. & Kiefer, F. ; Buchanan, J. B. ; Forest, J. ; Heegaard, P. ; Humes, A. G. & Cressey, R. F. (0-1) ; Lindberg, K. (2) ; Longhurst, A. R. ; Marques, E. (0-1) ; Reid, D. M. ; Sourie, R. ; Vincent-Cuaz, L.

Indo-Pacific.—Banner, A. H. ; Humes, A. G. (2) ; Johnson, D. S. ; Johnson, M. W. ; Indian Ocean, Menon, M. K. ; Panikhar, N. K. & Menon, M. K. ; Shiino, S. M. ; Tsuruta, A. ; Satow, T. ; Hayama, K. & Chiba, T. ; Venkataraman,

R., Chari, S. T. & Sreenivasan, A. ; Red Sea, Luther, W. ; Komarovskiy, B. ; Noodt, W. (1) ; Persian Gulf, Dawson, C. E. (1) ; Pakistan waters, Qureshi, M. R. ; Ceylon coast, Sivalingam, S. ; Zylva, E. R. A. de ; Indian waters, Ahmad, N. ; Gopinath, K. ; Kunju, M. M. ; Prasad, R. R. & Tampi, P. R. S. ; Daniel, A. (0 & 2) ; Gnanamuthu, C. P. ; Seshadri, B. ; East African Coast, Barnard, K. H. (1) ; Madagascar, Humes, A. G. (1) ; Humes, A. G., Cressey, R. F. & Gooding, R. U. ; Moçambique coast, Kalk, M. ; Seychelles, Ridley, M. W. & Percy, R. ; New Guinea, Brongersma, L. D. ; Holthuis, L. B. (1) ; Burma coast, Kyaw, U. Ba ; Indo-China seas, Forest, J. (1) ; Serene, R., Duc, T. V. & Luom, N. V. ; Viet-nam coast, Forest, J. (3) ; Singapore waters, Hall, D. N. F. ; Philippines, Delmendo, M. N. & Rabanal, H. R. ; Philippines, Domantay, J. J. ; Guam waters, Kesling, R. V. (3) ; Galapagos, Bott, R. ; Clipperton Is., Herlstein, L. G. & Emerson, W. K. ; Bimini area, Kornicker, L. S. ; Ile Mayotte, Guinot, D. (0-2).

SOUTH TEMPERATE

S. Atlantic Ocean.—Ingle, R. W. ; Boschma, H. (2) & (3).

S. African waters.—Barnard, K. H. ; Brown, A. C. (0-1) ; Ingle, R. W. ; Tattersall, O. S.

Australian waters.—Anon. ; George, R. W. ; Nicholls, A. G. ; Pope, E. C. ; Racek, A. A. ; Stephenson, W., Endean, R. & Bennett, I. ; Thomson, J. M.

N. Zealand waters.—Yaldwyn, J. C.

South Pacific Ocean.—Boden, B. P. & Brinton, E. ; Chile coast, Bahamonde, M. M. (2)

ANTARCTIC

Antarctic.—Beklemishev, C. W. ; Brodsky, K. A. ; Brodsky, K. A. & Vinogradov, M. E. ; Brodsky, K. A., Markov, K. K. & Shibnikov, V. I.

PALAEOONTOLOGY

PALAEOZOIC

Palaeozoic unspecified, **Suf, J.**

Ordovician.—**Copeland, M. J.** ; **Howell, B. F.** ; **Neckaja, A. I.** (1)

Silurian.—**Abushik, A. F.** ; **Fisher, D. W.** ; **Hopkins, D. M.** & **Conlin, R. R.** ; **Kesling, R. V.** (1) ; **Kesling, R. V.** & **Ehlers, G. M.** ; **Kesling, R. V.**, **Heany, F.**, **Kauffmann, E. G.** & **Oden, L.** ; **Krandievskii, V. S.** ; **Neckaja, A. I.** (1) ; **Pribyl, A.**

Devonian.—**Adamazak, F.** ; **Beerbower, J. R.** ; **Doroshko, S. N.** ; **Howell, B. F.** (1) ; **Kesling, R. V.** (2) & (6) ; **Kesling, R. V.** & **Peterson, R. M.** ; **Kesling, R. V.** & **Sohn, I. G.** ; **Kesling, R. V.** & **Soronen, G. C.** ; **Khizhniakov, A. V.** & **Tchirkova-Zalesskaya, E. F.** ; **Novojilov, N.** ; **Novozhilov, N.** & **Varentzov, I. M.** ; **Polenova, E. N.** ; **Predtechensky, N. N.** ; **Rabian, A.** & **Rabitz, A.** ; **Raznikin, V. A.** ; **Stumm, E. C.** & **Wright, J. D.** ; **Zaspelova, V. S.**

Carboniferous.—**Benson, R. H.** & **Collinson, C.** ; **Copeland, M. J.** (1) ; **Elias, M. K.** ; **Grachevsky, M. M.** ; **Lintz, J.** ; **Pribyl, A.** (1) ; **Raznizin, V. A.** ; **Robinson, J. E.** ; **Said, R.** & **Basiouni, M. A.** ; **Shaver, R. H.** ; **Tikhomirova, E. S.** ; **Vangerow, E. F.** ; **Wanless, H. R.** ; **Wolfenden, E. B.**

Permian.—**Chen, T. C.** ; **Lev, O. M.** ; **Malzahn, E.** ; **Novojilov, N.** ; **Lutkevich, E. M.** & **Schneider, G. F.** ; **Palant, I. B.** ; **Tasch, P.** (2).

MEZOZOIC

Mezozoic unspecified.—**Martinson, G. G.** ; **Novojilov, N.** (1) ; **Puri, H. S.** (3)

Triassic.—**Novojilov, N.** ; **Styk, O.**

Jurassic.—**Donovan, D. T.** ; **Gocht, H.** & **Goerlich, F.** ; **Kanski, N. E.** ; **Kellett, B.** & **Gill, E. D.** ; **Malz, H.** (1) ; **Martin, G. P. R.** ; **Certli, H. J.** ; **Pinto, I. D.** & **Sanguinetti, Y. T.** (1) ; **Taitt, A. H.** & **Kent, P. E.**

Cretaceous.—**Beurlen, K.** ; **Brishstein, Y. A.** (1) ; **Donovan,**

D. T. ; **Howe, H. V.** & **Laurencich, L.** ; **Kolosváry, G.** (1) ; **Marlière, R.** ; **Martin, G. P. R.** (1) ; **Novojilov, N. I.** (2) ; **Skinner, H. C.** ; **Sztejn, J.** ; **Taitt, A. H.** & **Kent, P. E.**

TERTIARY

Tertiary unspecified.—**Bold, W.** **A. van den** (1) ; **Fink, J.**, **Grill, R.**, **Kollmann, K.** & **Küpper, H.** ; **Grekoff, N.** (1) ; **Kubo, I.** (1) ; **Puri, H. S.** (3) ; **Roberts, H. B.**

Eocene.—**Eocene.**—**Davis, A. G.** & **Elliott, G. F.** ; **Frizzell, D. L.** & **Exline, H.** ; **Keij, A. J.** ; **Marianos, A. W.** & **Valentine, J. W.** ; **Puri, H. S.** (4) ; **Triebel, E.** ; **Roberts, H. B.** (1).

Oligocene.—**Goerlich, F.** ; **Kollmann, K.** ; **Schurmann, M.**

Miocene.—**Bold, W. A. van den** ; **Beurlen, K.** (1) & (2) ; **Kesling, R. V.** (3) ; **Lazarescu, V.** ; **Moret, L.** ; **Kolosváry, G.** (4) ; **Khara-tishvili, G. D.** ; **Ruggieri, G.** ; **Rutsch, R. F.**, **Drooger, C. W.** & **Oertli, H. J.** ; **Sieber, R.** ; **Zbyszewski, G.**

Pliocene.—**Gramm, M. N.** ; **Ruggieri, G.**

Pleistocene.—**Deraniyagala, P. E. P.** ; **Kesling, R. V.** (3) ; **Ozaki, H.** ; **Triebel, E.** (1) ; **Valentine, J. W.**

Holocene.—**Wagner, C. W.** ; **Arkhipov, S. N.** ; **Frey, D. G.** ; **Holland, F. D., Jr.** & **Cvancara, A. M.** ; **Imaizumi, R.** ; **Morkhoven, F. P. C. M. van** & **Wagner, C. W.**

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†*Defretinia*, **gen. nov.**, p. 397 for *A. argumica*, **sp. nov.**, p. 398 figs., Mesozoic, Transbaical, **Novojilov, N. (1).**

†*Diaplexa tigjanensis*, figs., **Novojilov, N.**

†*Echinestheria rossica*, **sp. nov.** Permian, Volga, p. 113 figs., **Novojilov, N.**

Eocyzicus concavus, fig., **Mattox, N. T.**; *E. minor*, figs., **Brehm, V. (3).**

†*Eoleaia elongata*, **sp. nov.**, p. 37 figs., Carboniferous, Nova Scotia, **Copeland, M. J. (1).**

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†*Estheria* spp., figs., **Malzahn, E.**

†*Estheriella lualabensis*, *E. tricostrata*, *E. camerouni*, figs., **Defretin, S.**

†*Estheririum parvum*, **gen. et sp. nov.**, p. 42 figs., Permian, Siberia, **Novojilov, N.**

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†*Eulinnadia rogeri*, **sp. nov.** Triassic, Siberia, p. 52 figs., **Novojilov, N.**

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†*Gutschickia bretonensis*, **sp. nov.** Carboniferous, Nova Scotia, p. 29 figs., **Copeland, M. J. (1).**

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†*Ipsilon auriculata*, figs., **Novojilov, N.**

†*Isaura (Euestheria) harveyi*, **sp. nov.**, p. 535, *I. (E.) harveyi wellingtoni*, p. 537, *I. (E.) h. leonardi*, p. 539, **subsp. nov.** Permian, Kansas, figs., **Tasch, P. (2).**

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†*Limnadiopsis brichii*, fig., **Novojilov, N.**

†*Limnadiopsium*, **gen. nov.** for *Limnadiopsis tatei* Spencer & Hall, fig., **Novojilov, N.**

†*Livestheria propinqua* Triassic, *L. nidymensis* Permian, **spp. nov.**, p. 30 figs., Siberia, **Novojilov, N.**; *L. ? simoni*, *L. striata*, figs., **Copeland, M. J. (1).**

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